

# OPTICAL AMPLIFICATION OF MOLECULAR INTERACTIONS USING LIQUID CRYSTALS

## ABSTRACT OF THE DISCLOSURE

5                   Interactions between molecules which are components of self-  
assembled monolayers and other molecules can be amplified and transduced into an  
optical signal through the use of a mesogenic layer. The invention provides a device  
and methods for detecting analytes. The device comprises a substrate onto which a  
self-assembled monolayer is attached and a mesogenic layer which is anchored by the  
10 self-assembled monolayer. The mesogenic layer undergoes a change in conformation  
in response to the molecular interaction.

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